HIGH PERFORMANCE BROADCAST
CONNECTIVITY PLATFORMS

BROADCAST CONNECTIVITY KITS

Industry Challenges

- Increasing number of video and audio connectivity standards for professional broadcast systems

- Convergence of broadcast and communications market requirements for higher system performance and low-power serial connectivity

- Demands imposed on broadcast equipment manufacturers for faster time to market and longer time in market with lower development costs

The Xilinx Solution

- Targeted design platforms tuned to the needs of high performance broadcast audio, video and network connectivity applications

- Out-of-the-box system design with hardware, software, reference designs and evaluation IP, and boards to shorten development and integration cycles

- Full support for triple rate SDI, AES audio, and video over IP designs with scalable platform for bridging to DVI, PCI Express, DisplayPort, and 10Gb Ethernet standards

Accelerate SDI Interface Development

Developed to address the rapidly evolving requirements in the broadcast market for greater bandwidth, improved jitter performance and lower power consumption, the Xilinx Virtex®-6 and Spartan®-6 FPGA Broadcast Connectivity Kits simplify development of high performance broadcast audio and video interface solutions. As a component of the Broadcast Targeted Design Platform, the kits fully integrate silicon devices optimized for high performance logic with high-speed serial connectivity, IP supporting SMPTE standards, complete design environment, pre-verified reference designs, and FPGA base boards with industry-standard FMC daughter cards for serial digital video and audio so development can begin right out of the box.

Differentiate Video and Audio Designs

With all the connectivity elements needed in one package, developers can focus on differentiating system designs rather than the challenges of implementing multiple video line rates and formats or adopting new and emerging DisplayPort, PCI® Express, and Ethernet AVB specifications. The kits allow designers to effectively target the full range of professional broadcast applications, including cameras, switchers, routers, encoders, professional monitors, and cinema projectors while gaining value-added productivity over à la carte development system assemblies. Multiple design examples provide insight and a kick-start on how to implement system-level IP, so broadcast equipment manufacturers can get to market faster with the latest innovations or upgrade products with new features to stay in market longer.

Simplify Integration of Audio, Video and Network Connectivity

Xilinx Broadcast Connectivity Kits provide scalable platforms for bridging between multiple interfaces to accommodate the high performance bandwidth and low-power serial connectivity requirements of IT equipment and communications network applications. With the ability to implement SD, HD, and 3G-SDI interfaces with other industry-standard and custom protocols, system designers can stream 3G-SDI video to/from a PC over PCI Express; take multiple compressed ASI streams over 10Gb Ethernet, and display incoming/outgoing video on DisplayPort monitors. This extraordinary level of integration significantly reduces material costs, requires less board space, and lowers overall power, particularly for professional broadcast audio and video systems requiring multiple channels.

For more information, support, documents and reference designs, or to purchase, please visit **www.xilinx.com/v6bck** or **www.xilinx.com/s6bck**

XILINX®

VIRTEX-6 FPGA BROADCAST CONNECTIVITY KIT

SPARTAN-6 FPGA BROADCAST CONNECTIVITY KIT

- ▪ ML605 base board with the XC6VLX240T-1FFG1156 FPGA
- ▪ FMC Broadcast Mezzanine Card
  - – 4 channel Triple rate SDI (SD/HD/3G-SDI) Tx and Rx
  - – 2 stereo pairs of AES3 Audio Tx
  - – Single stereo pair AES10 Audio (MADI) Tx and Rx
  - – Video sync ref clock and clock modules
- ▪ ISE® Design Suite—Embedded Edition (device-locked to Virtex-6 LX240T FPGA)
- ▪ Documentation
  - – Hardware Setup and User Guides
  - – Getting Started Guide
  - – Reference Designs User Guide
  - – Schematics and PCB files
- ▪ Cables:
  - – 2 USB, 1 Ethernet, 4 BNC-to-BNC coaxial cables
  - – DVI to VGA adapter
  - – Universal 12V power supply
- ▪ Reference designs and demos
  - – Triple rate SDI (SD/HD/3G-SDI) for transmit, receive and pass through
  - – PCIe Gen 2 (x4) and Gen 1 (x8), IBERT, DDR3 memory interface
  - – Board Diagnostic Demo

- ▪ TED base board with the XC6SLX150T-3FFG900 FPGA
- ▪ SDI/AES3 FMC Mezzanine Cards
  - – 4 channel Triple rate SDI (SD/HD/3G-SDI) supporting SMPTE-259M, SMPTE-292M, and SMPTE-424M
  - – 2 channel AES-3 Audio Tx and Rx
  - – Video sync input
- ▪ ISE Design Suite—Embedded Edition: (device-locked to Spartan-6 LX150T FPGA)
- ▪ Documentation
  - – Hardware Setup and User Guides
  - – Getting Started Guide
  - – Reference Designs User Guide
  - – Schematics and PCB files
- ▪ Cables:
  - – 2 USB, 1 Ethernet, 2 DIN 1.0/2.3 to BNC cables
  - – DVI to VGA adapter
  - – Universal 12V power supply
- ▪ Reference designs and demos
  - – Triple rate SDI (SD/HD/3G-SDI) for transmit, receive and pass through
  - – Board Diagnostic Demo

Take the NEXT STEP

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